



Town Of Concord ANNUAL SUSTAINABILITY REPORT 2020



Sustainability Division

The Sustainability Division works closely with Town departments, residents, businesses, and community groups to integrate sustainability and resilience into all that we do in Concord.

In 2020, we focused efforts on completing the Town's first comprehensive climate action and resilience plan, continuing to add electric vehicles to the Town fleet, and collaborating with community members and partners to expand outreach around sustainability in Concord.

Sustainability Division highlights of 2020 include:

- Completed Sustainable Concord, the Town's first comprehensive sustainability and resilience plan
- Adopted an "electric-first" vehicle policy for municipal vehicles
- Opted-in to the state's Property Assessed Clean Energy (PACE) program, a tax-based financing mechanism for energy improvements to commercial buildings
- Released a Sustainability Guide for Historic and Older Homes
- Participated in Climate Preparedness Week in collaboration with Concord Free Public Library
- Supported Concord's Comprehensive Sustainability and Energy Committee in releasing Your Sustainable Home Now! brochure

SUSTAINABLE CONCORD

Revolutionary

Resilient

Ready

Sustainable Concord is a roadmap to meet the commitments the Concord community made at 2017 and 2018 Annual Town Meetings to reduce GHG emissions 80% by 2050 and to prioritize climate resilience goals and initiatives.

Completed in the summer of 2020, Sustainable Concord continues work that has already been done and outlines **22 priority actions** in **5 plan elements** that can be taken over the next five years to ensure Concord is on a path to a sustainable future.

This year's annual report is organized by the 5 plan elements. **Explore the plan at sustainableconcord.org**



Built Environment



Energy



Mobility



Natural Resources



Preparedness



Built Environment

Concord residents who heat with natural gas can take advantage of Mass Save home energy assessments and a number of rebates for improved energy efficiency.

99 Home energy assessments completed by Mass Save

Mass Save provided rebates for energy efficiency measures in homes.

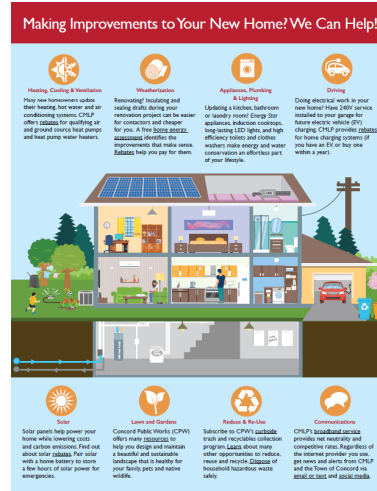
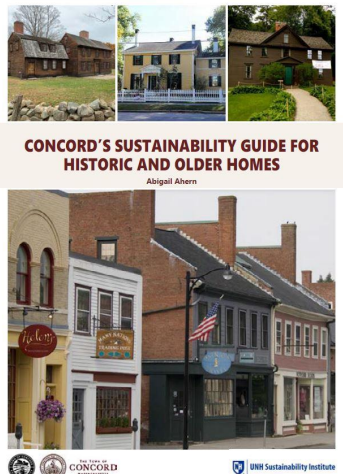
- ✓ 39 air sealing
- ✓ 38 insulation
- ✓ 77 heating/cooling systems
- ✓ 29 water heaters
- ✓ 115 wireless thermostats

Concord Municipal Light Plant provides home energy assessments and rebates for energy efficiency and electrification measures such as heat pumps, LED lighting, and heat pump hot water heaters.

63 Home energy assessments completed by Energy New England (ENE)

CMLP provided rebates for electrification measures that reduce GHG emissions from homes.

- ✓ 36 air-source heat pump
- ✓ 2 ground-source heat pump
- ✓ 8 heat pump water heaters
- ✓ 8 weatherization rebates
- ✓ 342 new LED bulbs installed with rebates



Concord released several new resources for making sustainable improvements to homes. The three guides are targeted to specific audiences including current Concord residents, homeowners of historic and older homes, and new Concord residents.

See page 8 of this report for links and details!



Over 100 people attended a Climate-Friendly Heating and Cooling Community Event held on February 29th at the Harvey Wheeler Community Center in Concord. CMLP co-sponsored the event with Concord's Sustainability Division and the HeatSmart Alliance, a coalition of volunteers from 25 area communities working together to promote sustainable heating and cooling. Event attendees learned about CMLP's rebates and services that help residents adopt heat pumps for space and water heating.

Waste and Recycling



DropOff Events

425 Households attended the Fall DropOff



Recycling

3,602 Households use Concord's curbside collection program

39% Of materials collected curbside are recycled

21,297 visits to the Compost Site (More than twice the number of visits in 2019!)





290

kW (DC) of new solar capacity in 2020

25

New solar installations in 2020

16

New batteries in 7 homes in 2020

7.57

MW total solar capacity of large-scale arrays

CMLP offers two rebate programs providing thousands of dollars towards the cost of installing solar panels at Concord homes or businesses.

In October, Concord opted in to the state's **PACE (Property Assessed Clean Energy)** program, a tax based financing mechanism for energy improvements to commercial buildings enabled by state legislation. The program provides commercial property owners access to third-party funds to invest in energy improvements to their property and allows for the funds to be repaid through a betterment assessment on the property tax bill. Opting into PACE expands opportunities for businesses to invest in renewable energy and energy efficiency.

New Rebates!

In 2020 Concord Municipal Light Plant expanded rebates available to commercial customers. In addition to the existing rebates for LED lighting and solar panels, CMLP now offers rebates for:

Air-source heat pumps

Heat pump water heaters

Electric patio heaters

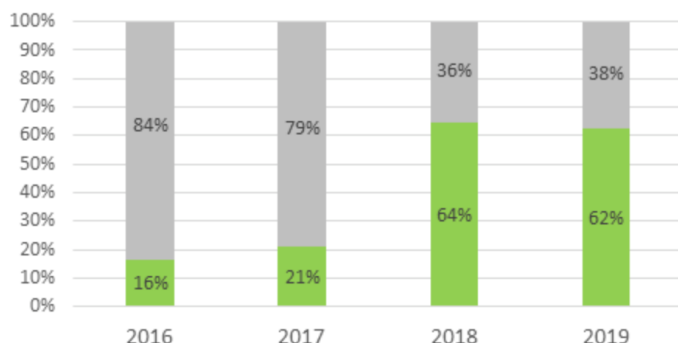
Ground-source heat pumps

Air purifiers

Find out more here: concordma.gov/Rebates



CMLP Carbon-Free Electricity



How we generate electricity is important to achieving Concord's climate goals. CMLP is committed to providing 100% carbon-free electricity by 2030. Each year, CMLP is working to keep us on track. Achieving that goal will reduce greenhouse gas emissions by nearly 23% community-wide.

During the last several years, CMLP has been de-carbonizing its power supply by purchasing renewable power from developers in Massachusetts, New Hampshire, Connecticut and Maine and by purchasing Renewable Energy Certificates (RECs).

In 2019, the Light Plant supplied 62% of its sales from carbon-free resources: 10% from wind, 11% from hydro, 7% from solar, and 34% from the purchase of Renewable Energy Certificates (RECs). We are on-track to meet our goal of 100% carbon-free by 2030.



Mobility

490

Total Electric Vehicles (EVs) registered in Concord

98

New EVs registered to Concord residents

3

New electric vehicles in municipal fleet

154

Vehicles enrolled in EV Miles

[EV Miles](#) participants program their electric vehicles to charge off-peak and receive a monthly bill credit for their participation.

20

Number of EV Level 2 rebates

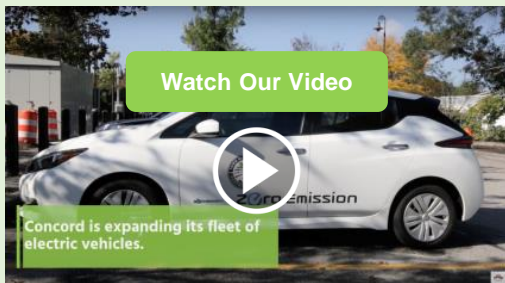
[EV Level 2 Program](#) offers owners a rebate of \$250 to help offset the cost of installing some or all components of a Level 2 system for higher speed charging of an electric vehicle at home.

“Electric-First” Fleet Policy

Concord’s Sustainable Fleet Policy requires new Town vehicle purchases to prioritize electric options. It also maintains fuel efficiency standards for conventional vehicles and requires other greenhouse gas reduction strategies, such as minimizing idling, for the Town’s vehicle fleet.



Concord Carlisle Regional School District added an electric Nissan Leaf to the driver’s education fleet.



Concord Drives Electric is a collaborative effort among Town and CMLP staff, Energy New England, and volunteers to promote electric vehicles. For more information, visit concorddriveselectric.org

[See the map of 9 public charging stations here!](#)



Many residents took advantage of Concord’s Bruce Freeman Rail Trail in 2020. An art project titled “Go Out Doors” featured painted doors, providing joy and inspiration for many who walked along the trail during the pandemic

In 2020 work continued on the next phase of the Bruce Freeman Rail Trail, a bridge over Route 2, which will be completed in 2022. (Below and right; Photos by Nathaniel Welch)



A new bridge over the Assabet River provides increased connectivity for pedestrians and bicyclists. (Right)



Natural Resources

31

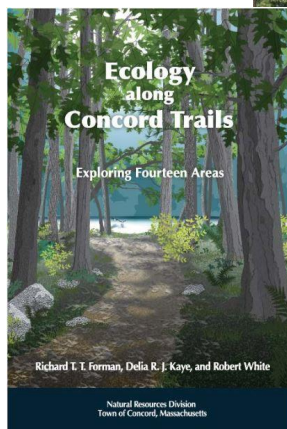
Miles of trail maintained by the Natural Resources Division

1

New book developed:
Ecology along Concord Trails

2

New pollinator Meadows established



Concord's Natural Resources Division is responsible for the stewardship of nearly 1,500 acres of Town conservation land (including White Pond Reservation), maintaining over 31 miles of trails, and mowing 84 acres to maintain trails and open meadows.

122

Street and setback trees planted by Concord Public Works thanks to grant funding



Concord Public Works is responsible for maintaining street and setback trees. In 2019, Concord received an MVP Action Grant from the state to plant trees to improve the community's resilience to climate change. In 2020, Concord Public Works planted 122 setback and street trees thanks to the grant funding.

22

Rebates provided by Concord Public Works for high efficiency clothes washers

2

New and improved portable water fountains for events

Concord Public Works provides rebates for high efficiency clothes washers. They also provide complimentary residential water saving devices including showerheads, aerators, garden nozzles, rain gages, and toilet fill cycle diverters.





Preparedness

The Sustainability Division continued and expanded its partnership with Concord Free Public Library in 2020 by participating in Climate Preparedness Week for the second time and joining a planning committee for a library sustainability plan. Climate Preparedness Week is a national effort to raise awareness of the impacts of climate change on communities.



In 2020 we transitioned to virtual events. These included a film screening and discussion, storytimes for children, and a well-received presentation by two Climate Reality Leaders, including Concord resident Keith Bergman, titled The Climate Reality and How To Talk to Your Kids About It.



Concord Free Public Library also hosted the Climate Ribbon Project, a visual demonstration of what the community stands to lose from climate change. Community members wrote on ribbons which were displayed at the Main Library.

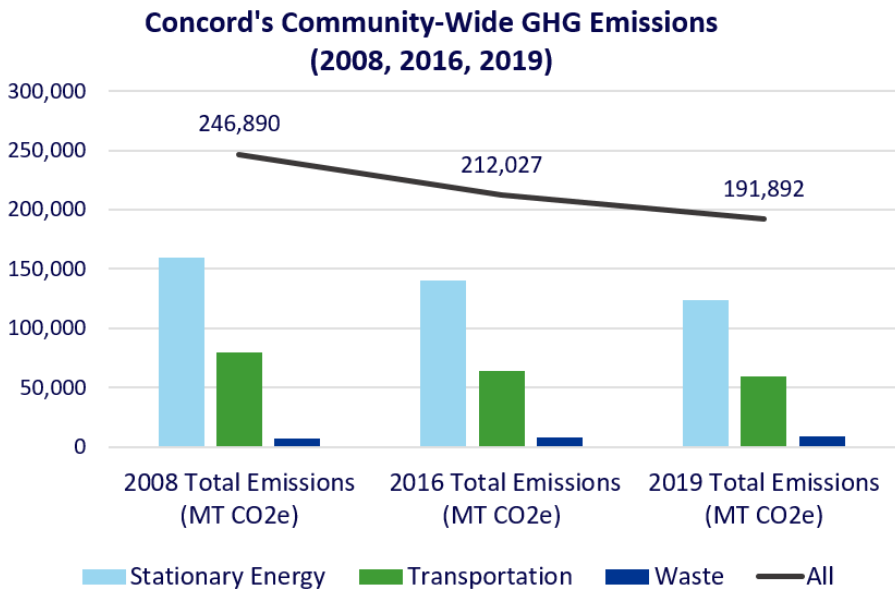
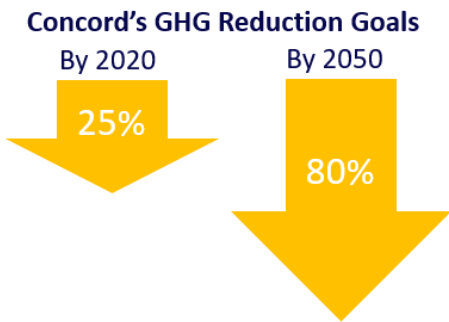


Working collaboratively with CPW's Engineering and Administrative Divisions, as well as with the Town's Sustainability Director, Water & Sewer Division staff selected a team of consultants to aid in the development of an Integrated Water Resources Plan (IWRP). As one of the priority actions outlined in Sustainable Concord, this important plan will provide recommendations for holistically addressing water supply, wastewater, and storm water considerations in the future.



Climate Goals

Concord's climate goals were established at 2017 Annual Town Meeting. A greenhouse gas (GHG) inventory is the standard approach to measuring community-wide GHG emissions. Concord completed a 2019 GHG inventory to track progress toward our goals.



The Town of Concord's total greenhouse gas emissions from 2008 to 2019 **decreased 22%**.

The emissions decrease was largely driven by:

- Increasingly decarbonized electricity supply
- More Concord residents driving electric vehicles and more efficient vehicles on the road overall
- A trend in switching from fuel oil to natural gas for heating
- More efficient energy use in buildings overall

SUSTAINABLE CONCORD

Revolutionary **Resilient** **Ready**

Sustainable Concord commits to 22 priority actions in the areas of built environment, energy, natural resources, mobility, and preparedness.

Sustainable Concord has been intentionally and strategically designed to prioritize solutions for both reducing greenhouse gas emissions (mitigation) while improving our community's resilience (adaptation) to the impacts of climate change.

The Town is committed to taking the lead on implementation of this Plan with focus on three leadership priorities – governance, education, and social resilience.

While community-wide emissions are trending down, we need to take additional action to meet our climate goals. Sustainable Concord is our roadmap for action over the next 5 years.



Governance
Integrate sustainability goals, metrics, and evaluation criteria into Town planning, including staff and department evaluations and budgeting.



Social Resilience
Prepare businesses, residents, and agriculture for the impacts of climate change through education and climate preparedness planning.



Education
Work with educators, parents, students, the School Department, and the State to bring climate education curricula into schools and student activities.

Learn more and join the conversation!



[Town Website](#)



[YouTube](#)



[Twitter](#)



[Newsletter](#)



[Facebook](#)



[Email](#)



2020 Annual Sustainability Report produced by Kate Hanley, Director of Sustainability with support from Concord Municipal Light Plant, Natural Resources Division, Department of Planning and Land Management, Concord Public Works, Water/Sewer Division, Concord Free Public Library, and Public Information Office.

New Resources!

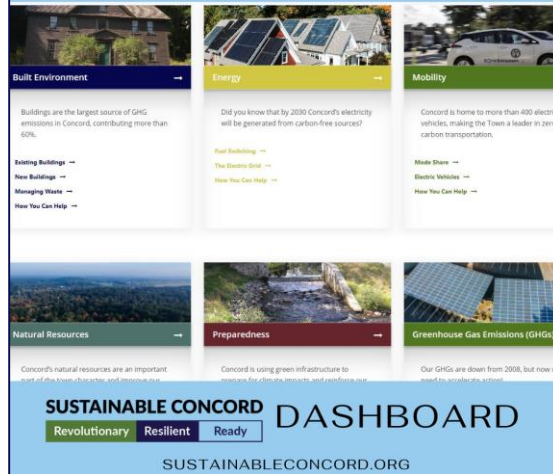
Concord released a number of new resources in 2020 for a more sustainable Concord. Take a look and share!



CONCORD'S
CLIMATE ACTION AND RESILIENCE PLAN
2020

[Sustainable Concord](#) is Concord's Climate Action and Resilience Plan. It includes 22 priority actions and 3 leadership priorities.

INTRODUCING



The [Sustainable Concord Dashboard](#) is an interactive way to learn about Concord's climate action plan, explore our climate data, and take action to improve Concord's sustainability.

Ecology along Concord Trails

Exploring Fourteen Areas

Richard T. T. Forman, Delia R. J. Kaye, and Robert White

Natural Resources Division
Town of Concord, Massachusetts

Concord's [new trail book](#) highlights Town-wide history and ecology, with a deeper dive into fourteen popular natural areas.



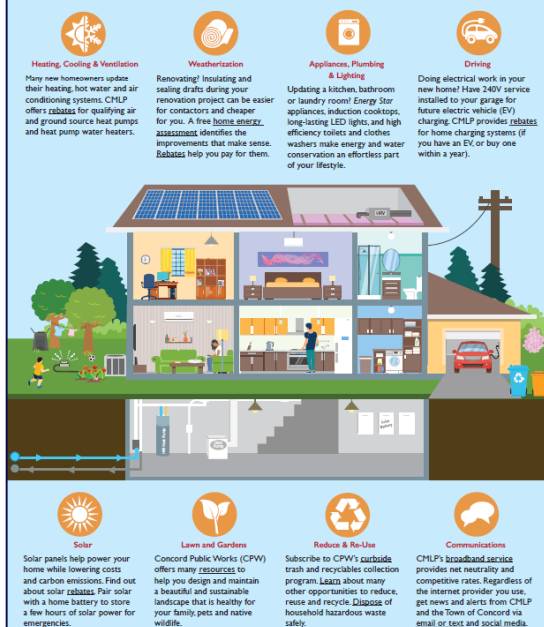
CONCORD'S SUSTAINABILITY GUIDE FOR HISTORIC AND OLDER HOMES

Abigail Ahern



[Concord's Sustainability Guide for Historic and Older Homes](#) provides step-by-step guidance for retrofitting for sustainability while preserving historic character. (Developed in collaboration with UNH Sustainability Institute Summer Fellowship and summer intern Abigail Ahern.)

Making Improvements to Your New Home? We Can Help!



Many new homeowners make updates or retrofits to their home. It's the perfect time to renovate with sustainability in mind. [Concord Municipal Utilities are here to help.](#)



[Your Sustainable Home Now!](#) is your guide to making your Concord home more sustainable. It covers, energy, water, vehicles, landscaping, and more!